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TDB-ACC-NO: NN87013559

DISCLOSURE TITLE: Minimizing Logging to Facilitate Recovery of Tablespace

PUBLICATION-DATA:
IBM Technical Disclosure Bulletin, January 1987, US

VOLUME NUMBER: 29
ISSUE NUMBER: 8
PAGE NUMBER: 3559

PUBLICATION-DATE: January 1, 1987 (19870101)

CROSS REFERENCE: 0018-8689-29-8-3559

DISCLOSURE TEXT:

- This invention relates to a method for minimizing logging required to facilitate
the recovery of tablespace reorganization. In relational data base management
systems such as DB2, recoverability of a tablespace is achieved by making a copy of
the tablespace as it exists at a checkpoint, and then logging changes to the
tablespace after the checkpoint. When the copy of the tablespace is made, a
description of the copied data set and the current location of the log are added to
a designated storage, such as the DB2 SYSCOPY table. Reorganization of the
tablespace, by which unused space of the tablespace is deleted and redistributed,
is performed by reloading individual rows of the tablespace into a sequential data
set, called an unload data set, setting the tablespace at empty, and reloading the
rows back to the tablespace in the same order as they were unloaded. To ensure
recoverability of the reorganization, the reloading activities are logged, thus
creating a large volume of log records and significantly increasing processing
time. To eliminate the need for logging the reloading activities, an entry is
inserted into the designated storage, such as the DB2 SYSCOPY table, describing the
unload data set. The location of the log when the reorganization process is
completed is stored. If recovery is needed, the reloading process of the
reorganization is repeated utilizing the description of the unload data set and
applying subsequent changes from the log.